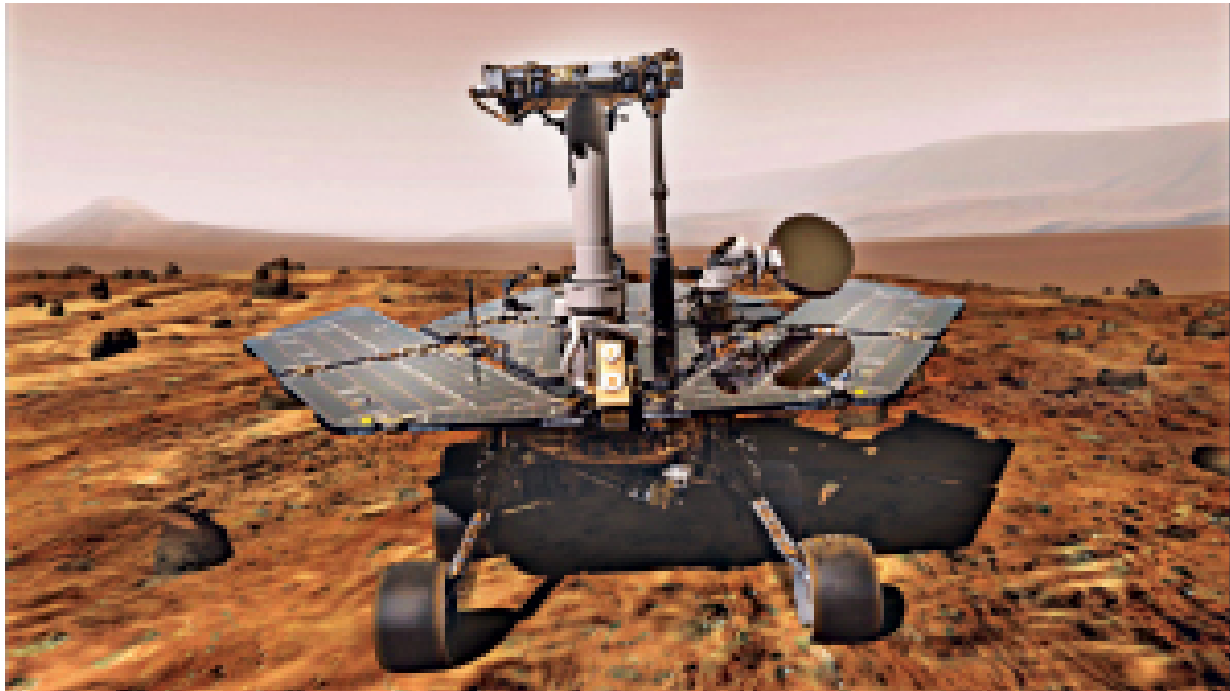


October 2008 Edition

LASER MARKING

Now *That's* Product Distribution

Products from a laser-marking company have ended up rolling across the Martian landscape. The journey began with the company finding a system that would meet the demands of itself and its customers.



Jet City Laser marked the face and edges of the Martian Sundial launched on board the Mars rovers Spirit and Opportunity – using its old equipment

Some companies will go to any lengths for quality, Jet City Laser, Inc., Auburn, WA, went to Mars. It used its laser marking system to mark the face and edges of the Martian Sundial launched on board the Mars rovers Spirit and Opportunity. But, the company found the system was inadequate to maintain the quality and quantity of laser marking its customer demanded. While Jet City Laser's products were roaming the red planet, the company roved the market to find a laser marking system that would meet its needs.

Jet City Laser provides laser marking and engraving for industrial metal parts with unique identification – UID – codes, data plates, barcodes, 2D data matrix codes, and other marking tasks.

The company works with hundreds of customers; it uses laser equipment to deliver markings for a range of materials of different shapes and sizes. UID specifications demand traceability of marked parts by means of a unique identifying 2D code, which consists of a part number, a serial number, and other data. For Jet City's clients, these codes must be readable at all times to guarantee verification and compliance standards.

As a result, the company ensures its markings are legible to its clients' reading systems. Cells within the 2D code must be of the highest quality and contrast. This can pose a challenge when working with some metals, such as anodized aluminum. While it is one of the preferred materials for the identification tags placed on parts, it usually cannot achieve the required level of contrast as easily as with other metals.

"Every [Trotec Laser] that we have purchased has paid for itself in less than one year's time"

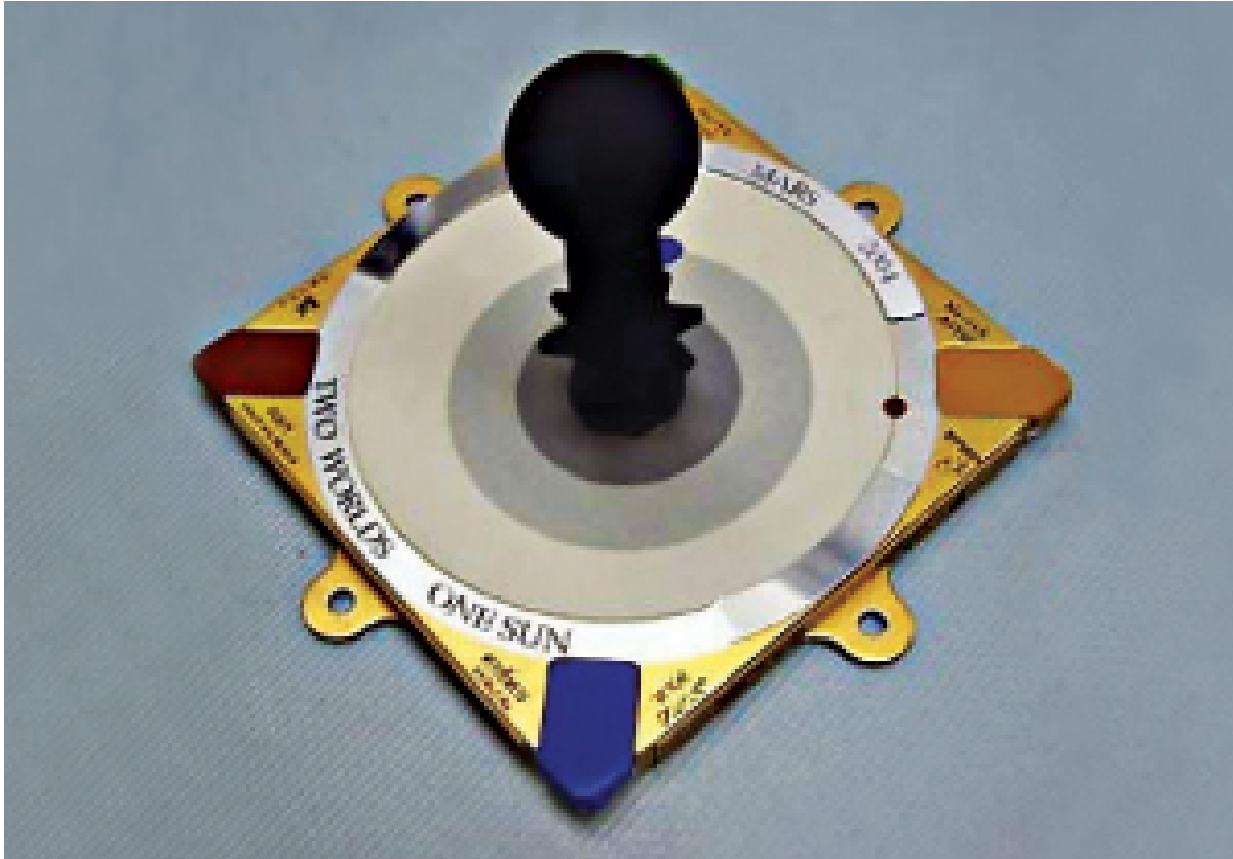
Because Jet City works for different clients with different parts that vary in geometry and metal, consistency and reliability across all materials is important.

Unfortunately, the company discovered that few laser machines could live up to the challenge. After using and operating nearly all of the major laser marking, cutting, and engraving systems available, the company decided to replace all of its equipment with CO₂ and YAG laser machines from Trotec Laser, Inc., Ypsilanti, MI.

Trotec to the Rescue

"The lasers we were using required at least twice the work to ensure the accuracy of jobs," Jim Wright, founder of Jet City Laser, said. "We regularly had to mark parts two or three times to get it right. This created unnecessary scrap and wasted time."

In some cases, according to Wright, the machines could not handle the workload.



Using the Trotec laser, Jet City Laser has dramatically increased productivity, generating three times more product, such as this UID tag, as compared to original volumes, by eliminating the need to repeat jobs for accuracy

"For one project, we had to mark more than 25,000 lines of code for regulated aviation materials. The laser we were using ran two lines, then stopped functioning. It was just too much for that machine," he said. "I ordered a Trotec laser, which was running by the next day and finished the job on the first run."

That first purchase was Trotec's Speedy 300, a compact, benchtop CO₂ laser system that works with a range of metal materials.

Frustrated by the poor quality of its other systems, Jet City switched to Trotec laser marking machines. Other CO₂ lasers of the same model were installed, followed by a number of Trotec's FineMarker lasers – which today sit at the heart of Jet City's operation.

"Now, our lasers are dependable and reliable, delivering quality every time," Wright said. "We never have to make second passes or redo work."

Worthwhile Investment

The company increased productivity, generating three times more product as compared to original volumes by eliminating the need to repeat jobs for accuracy. This has also reduced scrap rates.



For the next Mars mission in 2010, Jet City Laser used a Trotec machine and saw a dramatic improvement in quality

"When you look into making a purchase of a laser system, what you need to look at is payback – will you get your money back, how much and how fast? The accuracy, reliability, and longevity of our Trotec lasers have provided for a rapid return on investment," Wright said. "Every one that we have purchased has paid for itself in less than one year's time, making each investment incredibly worthwhile."

Jet City regularly sees the difference in the projects it manages for its clients. For example, the company worked with the University of Washington and NASA to mark the face and edges of the Martian Sundial launched on board the Mars rovers Spirit and Opportunity – using its old equipment.

For the next Mars mission in 2010, the company was commissioned to make its mark. This time, it used a Trotec machine and saw a dramatic improvement in quality. Other projects include producing over 33,000 2D tags for Seagate, which to date have had more than 40 million error-

free reads, and re-marking worn codes on more than 140,000 reamers used on the flight line at Boeing Everett. *Trotec Laser Inc.*